

鞠睿阳 (Rui-Yang Ju)

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教育经历

国立台湾大学

台北, 台湾

理学硕士: 资讯网络与多媒体研究所

2023.09 – 2025.06

- 总均分: **90.10/100**, GPA: **4.03/4.3**
- 指导教师: 洪一平教授

淡江大学

新北, 台湾

工程学士: 电子与计算机工程系

2019.09 – 2023.06

- 总均分: **94.50/100**, GPA: **4.0/4.0**, 系排名: **1/68**
- 指导教师: 江正雄教授

交换经历

剑桥大学

剑桥, 英国

在线课程: 人工智能伦理与社会

2021.06 – 2021.07

复旦大学

上海, 中国

暑期课程: 科学研究方法与论文写作

2019.09 – 2019.09

北京大学

北京, 中国

暑期课程: 视频编辑

2019.08 – 2019.08

研究兴趣

我的主要研究兴趣包括深度学习、神经网络、计算机视觉和图像处理。此外，我还参与了一些跨领域的项目，例如自然语言处理和语音处理。我已完成及正在进行的研究主要集中在以下课题：

- [R4] 三维面部表情重建: 计算机图形学、三维计算机视觉、三维人脸重建、三维人脸动画、图形渲染
- [R3] 彩色退化文件图像二值化: 图像生成、图像增强、图像二值化、生成对抗网络、离散小波变换
- [R2] 儿科手腕创伤 X 光图像中的骨折检测: 医学图像处理、医学影像诊断、目标检测、YOLO、注意力机制
- [R1] 神经网络模型中层和块的连接策略: 图像分类、图像超分辨率、卷积神经网络、Transformer、残差学习

出版物

期刊论文

- [J6] Rui-Yang Ju, Yu-Shian Lin, Yanlin Jin, Chih-Chia Chen, Chun-Tse Chien, Jen-Shiun Chiang, “**Three-stage Binarization of Color Document Images Based on Discrete Wavelet Transform and Generative Adversarial Networks**”, *Knowledge-Based Systems*, 2024. (IF 7.2) [arXiv] [Published] [GitHub]
- [J5] Chun-Tse Chien, Rui-Yang Ju, Kuang-Yi Chou, Jen-Shiun Chiang, “**YOLOv9 for Fracture Detection in Pediatric Wrist Trauma X-ray Images**”, *Electronics Letters*, 2024. (IF 0.7) [arXiv] [Published] [GitHub]
- [J4] Rui-Yang Ju, Weiming Cai, “**Fracture Detection in Pediatric Wrist Trauma X-ray Images Using YOLOv8 Algorithm**”, *Scientific Reports*, 2023. (IF 3.8) [arXiv] [Published] [GitHub]
- [J3] Rui-Yang Ju*, Chih-Chia Chen*, Jen-Shiun Chiang, Yu-Shian Lin, Wei-Han Chen (*=equal contribution), “**Resolution Enhancement Processing on Low Quality Images Using Swin Transformer Based on Interval Dense Connection Strategy**”, *Multimedia Tools and Applications (MTA)*, 2023. (IF 3.0) [arXiv] [Published] [GitHub]
- [J2] Rui-Yang Ju, Ting-Yu Lin, Jia-Hao Jian, Jen-Shiun Chiang, “**Efficient Convolutional Neural Networks on Raspberry Pi for Image Classification**”, *Journal of Real-Time Image Processing (JRTIP)*, 2023. (IF 2.9) [arXiv] [Published] [GitHub]
- [J1] Rui-Yang Ju, Ting-Yu Lin, Jia-Hao Jian, Jen-Shiun Chiang, Wei-Bin Yang, “**ThreshNet: An Efficient DenseNet Using Threshold Mechanism to Reduce Connections**”, *IEEE Access*, 2022. (IF 3.9) [arXiv] [Published] [GitHub]

会议论文

- [C8] Rui-Yang Ju, Chun-Tse Chien, Chia-Min Lin, Jen-Shiun Chiang, “**Global Context Modeling in YOLOv8 for Pediatric Wrist Fracture Detection**”, *International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS)*, Kaohsiung, Taiwan, 2024. [\[arXiv\]](#) [\[GitHub\]](#)
- [C7] Yanbing Bai, Siao Li, Rui-Yang Ju, Zihao Yang, Jinze Yu, Jen-Shiun Chiang, “**FAD-SAR: A Novel Fishing Activity Detection System via Synthetic Aperture Radar Images Based on Deep Learning Method**”, *International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS)*, Kaohsiung, Taiwan, 2024. [\[arXiv\]](#)
- [C6] Rui-Yang Ju, Chun-Tse Chien, Jen-Shiun Chiang, “**YOLOv8-ResCBAM: YOLOv8 Based on An Effective Attention Module for Pediatric Wrist Fracture Detection**”, *International Conference on Neural Information Processing (ICONIP)*, Auckland, New Zealand, 2024. [\[arXiv\]](#) [\[GitHub\]](#)
- [C5] Rui-Yang Ju, Yu-Shian Lin, Jen-Shiun Chiang, Chih-Chia Chen, Wei-Han Chen, Chun-Tse Chien, “**CCDWT-GAN: Generative Adversarial Networks Based on Color Channel Using Discrete Wavelet Transform for Document Image Binarization**”, *Pacific Rim International Conferences on Artificial Intelligence (PRICAI)*, Jakarta, Indonesia, 2023. [\[arXiv\]](#) [\[Published\]](#) [\[GitHub\]](#)
- [C4] Rui-Yang Ju, Jen-Shiun Chiang, Chih-Chia Chen, Yu-Shian Lin, “**Connection Reduction of DenseNet for Image Recognition**”, *International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS)*, Penang, Malaysia, 2022. [\[arXiv\]](#) [\[Published\]](#) [\[GitHub\]](#)
- [C3] Rui-Yang Ju, Ting-Yu Lin, Jen-Shiun Chiang, “**TripleNet: A Low-Parameter Network for Low Computing Power Platform**”, *IET International Conference on Engineering Technologies and Applications (IET-ICETA)*, Changhua, Taiwan, 2022. [\[arXiv\]](#) [\[Published\]](#) [\[GitHub\]](#)
- [C2] Rui-Yang Ju, Ting-Yu Lin, Jen-Shiun Chiang, Jia-Hao Jian, Yu-Shian Lin, Liu-Rui-Yi Huang, “**Aggregated Pyramid Vision Transformer: Split-transform-merge Strategy for Image Recognition without Convolutions**”, *IEEE International Conference on Consumer Electronics - Taiwan (ICCE-TW)*, Taipei, Taiwan, 2022. [\[arXiv\]](#) [\[Published\]](#)
- [C1] Rui-Yang Ju, Ting-Yu Lin, Jen-Shiun Chiang, “**New Pruning Method Based on DenseNet Network for Image Classification**”, *International Conference on Technologies and Applications of Artificial Intelligence (TAAI)*, Taichung, Taiwan, 2021. [\[arXiv\]](#) [\[Published\]](#)

预列印论文

- [A5] Rui-Yang Ju, Chun-Tse Chien, Enkaer Xieerke, Jen-Shiun Chiang, “**Pediatric Wrist Fracture Detection Using Feature Context Excitation Modules in X-ray Images**”, *arXiv preprint*, 2024. [\[arXiv\]](#) [\[GitHub\]](#)
- [A4] Yanlin Jin, Rui-Yang Ju, Haojun Liu, Yuzhong Zhong, “**ORB-SfMLearner: ORB-Guided Self-supervised Visual Odometry with Selective Online Adaptation**”, *arXiv preprint*, 2024. [\[arXiv\]](#) [\[Webpage\]](#)
- [A3] Rui-Yang Ju, KokSheik Wong, Jen-Shiun Chiang, “**Efficient GANs for Document Image Binarization Based on DWT and Normalization**”, *arXiv preprint*, 2024. [\[arXiv\]](#) [\[GitHub\]](#)
- [A2] Chun-Tse Chien, Rui-Yang Ju, Kuang-Yi Chou, Enkaer Xieerke, Jen-Shiun Chiang, “**YOLOv8-AM: YOLOv8 Based on Effective Attention Mechanisms for Pediatric Wrist Fracture Detection**”, *arXiv preprint*, 2024. [\[arXiv\]](#) [\[GitHub\]](#)
- [A1] Yanbing Bai, Zihao Yang, Jinze Yu, Rui-Yang Ju, Bin Yang, Erick Mas, Shunichi Koshimura, “**Flood Data Analysis on SpaceNet 8 Using Apache Sedona**”, *arXiv preprint*, 2024. [\[arXiv\]](#)

专利

- [P2] Rui-Yang Ju, “可吸尘之装载装置”, 台湾新型专利, TWM595589U, 2020.05. [\[Google Patents\]](#)
- [P1] Rui-Yang Ju, “可收纳烟蒂之烟盒”, 台湾新型专利, TWM576794U, 2019.04. [\[Google Patents\]](#)

研究项目补助

- [G3] 共同研究者, 应用于建物裂缝侦测之人工智慧影像超解析度与语义分割技术研究, 台湾科学及技术委员会, 由江正雄教授主持, 2023-2025, TWD1,756,000.
- [G2] 共同研究者, 基于 **Transformer** 架构之高效率多特徵融合文件语义分割系统之研究, 台湾科学及技术委员会, 由江正雄教授主持, 2022-2023, TWD690,000.
- [G1] 主要研究者, 改良式文件语义分割网络, 专题研究计划, 淡江大学研究发展处, 2021-2022, TWD48,000.

奖学金

- [S9] 研究生陆生奖学金, 国立台湾大学, 2024.11, TWD9,000
- [S8] 研究生陆生奖学金, 国立台湾大学, 2024.05, TWD8,000

- [S7] 感恩与传承奖学金, 中华国际财经创意交流协会, 2024.05, USD600
- [S6] 研究计划奖学金, 国立台湾大学, 2024.02, TWD36,000
- [S5] 研究生陆生奖学金, 国立台湾大学, 2023.11, TWD8,000
- [S4] 学业优良奖学金, 淡江大学, 2022.12, TWD10,000
- [S3] 感恩与传承奖学金, 中华国际财经创意交流协会, 2022.03, USD200
- [S2] 学业优良奖学金, 淡江大学, 2021.05, TWD10,000
- [S1] 感恩与传承奖学金, 中华国际财经创意交流协会, 2021.03, USD100

荣誉及奖项

- [H3] 工学院大禹奖, 淡江大学, 2022.05
- [H2] 创新创业竞赛佳作奖, 淡江大学, 2021.05
- [H1] 创新创业周最佳人气奖, 逢甲大学, 2018.12

专业服务

期刊审稿人

- [JR12] Cognitive Computation.
- [JR11] Telecommunication Systems.
- [JR10] International Journal of Computational Intelligence Systems.
- [JR9] Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization.
- [JR8] International Journal of Multimedia Information Retrieval.
- [JR7] Scientific Reports.
- [JR6] Plos One.
- [JR5] Signal, Image and Video Processing.
- [JR4] The Journal of Supercomputing.
- [JR3] Frontiers in Computer Science.
- [JR2] International Journal of Machine Learning and Cybernetics.
- [JR1] Knowledge-based Systems.

会议委员会

- [CC3] IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Hyderabad, India, 2025, **Reviewer**.
- [CC2] Pacific Rim International Conference on Artificial Intelligence (PRICAI), Kyoto, Japan, 2024, **Program Committee**.
- [CC1] Pacific Rim International Conference on Artificial Intelligence (PRICAI), Jakarta, Indonesia, 2023, **Program Committee**.

专业会员

- 会员, IET 英国工程技术学会 2024.04 – Present
- 学生会会员, IET 英国工程技术学会 2022.06 – 2023.09
- 学生会会员, IEEE 电子电机工程师学会 2022.03 – Present

课外活动经历

- 副社长, 淡江跆拳道社团 2020.09 – 2021.06
- 活动策划, 淡江跆拳道社团 2020.01 – 2020.06
- 活动策划, 逢甲跆拳道社团 2019.01 – 2019.06
- 大前锋/中锋, 系篮球队, 逢甲大学 2018.09 – 2019.01
- 大前锋/中锋, 逢甲陆生篮球队 2018.09 – 2019.01

志愿者经历

- 巴厘岛志愿者 巴厘岛, 印度尼西亚
- 教学项目 2021.01 – 2021.02
- 越南志愿者 胡志明市, 越南
- 社会餐厅项目 2019.01 – 2019.01